RELATIONSHIP OF PERSONALITY AND OCCUPATIONAL INTEREST AMONG TSUNAMI AFFECTED YOUTH

DISSERTATION SUBMITTED TO ANNAMALAI UNIVERSITY, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PHILOSOPHY IN PSYCHOLOGY

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DECLARATION

I hereby declare that the dissertation entitled “Relationship of Personality and Occupational Interest among Tsunami affected Youth” submitted for the Degree of Master of Philosophy in Psychology is my original work and the dissertation has not formed the basis for the award of any degree, diploma, associateship, fellowship or similar other titles. It has not been submitted to any other University or Institution for the award of any degree or diploma.

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CHAPTER I

INTRODUCTION

A **natural calamity** is the consequence of a physical event caused by a potential natural hazard (e.g. volcanic eruption, earthquake, landslide, tsunami etc) and this interacts with human activities. Human vulnerability, caused by the lack of planning, lack of appropriate emergency management or the event being unexpected, leads to financial, structural, and human losses. The resulting loss depends on the capacity of the population to support or resist the disaster, their resilience. This understanding is concentrated in the formulation: "disasters occur when hazards meet vulnerability". A natural hazard will hence never result in a natural disaster in areas without vulnerability, e.g. strong earthquakes in uninhabited areas. The term natural has consequently been disputed because the events simply are not hazards or disasters without human involvement. The degree of potential loss can also depend on the nature of the hazard itself, ranging from a single lightning strike, which threatens a very small area, to impact events, which have the potential to end civilization.

In India, various kinds of natural disasters take place. The following

are the common natural disasters, which occur very often at different parts of the country.

Drought is perhaps the manifestation of desertification. This may be because of unprecedented soil erosion, large scale deforestation and abrupt change in micro-climate. These result on increased temperature, reduction in rainfall etc., ultimately leading to fall of groundwater level. As a result, there is a loss of agricultural productivity of the land. Since Indian Agriculture is mostly rain-fed, the occurrences of Droughts are common in different parts of the country.

When it rains heavily in the catchments of rivers and in the absence of a dam, especially during monsoon, the rivers flood. Like drought, occurrence of flood is also quite common in various parts of the country.

The geological strata of the country belong to Gondwana land-mass. This is comparatively new, younger and unstable geological formation. There are still many parts of the country that one earthquake-prone. The recent is being the earthquake of Bhuj in Gujarat. The great Himalayan Mountain range, which belongs to comparatively the younger geological formations, is still undergoing morphological changes.

Due to low pressure in the atmosphere and frequent formation of whirls, cyclones take place at the eastern coast of India. In the Bay of Bengal of Indian Ocean, these Low- pressure Whirls are formed and get transmitted to the coastal districts of Andhra Pradesh and Orissa. The recent super-cyclone at Orissa in October, 1999 took away the life of more than 25,000 people, destroyed properties of more than thousand billion rupees and more than a million people rendered jobless. The livelihood of the common mass also got severely threatened.

In recent days, India has been affected by a new form of natural calamity i.e. flowing of heat waves, killing thousands of people in the Northern and Eastern parts of the country like, Uttar Pradesh, Bihar, Rajasthan, Gujarat, Orissa and Andhra Pradesh. The flow of heat waves is also known as 'Sun-stroke,' which in fact, is common in our country. In Orissa, alone about 151 people died of "Sun-stroke "in 1999. The worst sufferers are physically weaker persons, old men and women and children.

The incident of death due to cold waves is higher in lesser Himalayas especially in the States of Uttranchal, Sikkim, Himachal Pradesh and

Northern Parts of West Bengal including Darjeeling.

In addition, there are also other natural calamities such as Tornado, Spiral tide Whirls etc, which occur very often in our country.

Tsunami

A **tsunami** is a series of waves created when a body of water, such as an ocean, is rapidly displaced. Earthquakes, mass movements above or below water, volcanic eruptions and other underwater explosions, landslides, large meteorite impacts comet impacts and testing with nuclear weapons at sea all have the potential to generate a tsunami. The effects of a tsunami can range from unnoticeable to devastating. The Latin derivative of the word for the smaller waves experienced across the Italian coast was Fillius Sum Sunamus which means, son of tsunamis, inspired by the Japanese word similar to "tsunami" after relations with the shogun of Japan. The term tsunami comes from the Japanese words meaning *harbor* and *wave*.

A tsunami has a much smaller amplitude (wave height) offshore, and a very long wavelength (often hundreds of kilometers long), which is why they generally pass unnoticed at sea, forming only a passing "hump" in the ocean. Tsunamis have been historically referred to as *tidal waves* because as

they approach the land, they take on the characteristics of a violent onrushing tide rather than the sort of cresting waves that are formed by wind action upon the ocean (with which people are more familiar). Since they are not actually related to tides, the term is considered misleading and its usage is discouraged by oceanographers.

2004 - Indian Ocean Tsunami

The 2004 Indian Ocean earthquake, which had a magnitude of 9.0 to 9.3, triggered a series of lethal tsunami on December 26, 2004, that killed approximately 300,000 people (including 168,000 in Indonesia alone), making it the deadliest tsunami as well as one of the deadliest natural disasters in recorded history. It also had the second-largest earthquake in recorded history. The initial surge was measured at a height of approximately 33 meters (108 feet), making it the largest earthquake-generated tsunami in recorded history. The tsunami killed people over an area ranging from the immediate vicinity of the quake in Indonesia, Thailand, and the north-western coast of Malaysia, to thousands of kilometers away in Bangladesh, India, Sri Lanka, the Maldives, and even as far away as Somalia, Kenya, and Tanzania in eastern Africa. This is an

example of a teletsunami which can travel vast distances across the open ocean; in this case, it is an inter-continental tsunami. Tsunami waves 2.6 meters tall were reported even in places such as Mexico, nearly 13,000 km away from the epicenter. The energies for these waves travel along fault lines and becoming concentrated therefore traveling further.

Unlike in the Pacific Ocean, there was no organized alert service covering the Indian Ocean. This was in part due to the absence of major tsunami events since 1883 (the Krakatoa eruption, which killed 36,000 people). In light of the 2004 Indian Ocean tsunami, UNESCO and other world bodies have called for an international tsunami monitoring system.

According to the table of casualties on the Home Ministry website 10,749 casualties have been confirmed on the 18th January 2005, most of them in the state of Tamil Nadu. There were 5,640 people missing, nearly all of them on the Andaman and Nicobar Islands. In the meantime the death toll has been slashed down by 1,458, and the number missing by 2,927 on the Andaman and Nicobar Islands.

Psychological Impact of Tsunami

It is likely that epidemiologists will conduct studies and find much higher or lower rates of disorder in some tsunami-affected countries. This is because in disasters, the distinction between normal psychological distress and mild mental disorder is unclear. Prevalence rates found in disaster studies tend to be extremely reactive to variations in assessment method, case definition, and the population's willingness to endorse symptoms in studies.

Liquorshops run by the government's Tamilnadu State Marketing Corporation (TASMAC) in the affected areas are reporting roaring sales as men make a bee-line to them, with relief amounts in their hands, apparently to get over the tsunami-induced gloom. Children in the affected areas have suffered a complete disruption of their studies, loss of study materials and loss of family members, resulting in great psychological trauma.

Various causes of psychological disturbances among Tsunami affected have been highlighted (Waddington A, Ampelas JF, Mauriac F, et al., 2003; 29: 20-7). These include pain, sudden and unexpected nature of events and the procedures and interventions recruited to resuscitate and stabilize the patients (Mohta M, Sethi AK, Tyagi A, Mohta A. 2003; 34: 17-25). The

patients react to these stressors by various defense mechanisms such as conversion, withdrawal, denial, regression, pain, anxiety, adjustment disorder symptoms and depression. Some of them develop delirium or even more severe problems like pain disorder or post-traumatic stress disorder (Asmundson GJ, Bonin MF, Frombach IK, Norton GR. 2000; 38: 801-12). Physical, pharmacological or psychological interventions can be provided to prevent or minimize these problems in trauma patients. One such broad factor is neuroticism reflecting emotional distress, tendency to worry, hyper vigilance, and proneness to psychopathology (Claridge G, Davis C. 2001; 31: 383-400).

Findings suggest that neuroticism, also called negative affect, is related to a wide range of dysfunctions and diseases such as depression, pain syndromes, eating disorders, psychosomatic complaints, and poor coping strategies (Davis C. 1997; 22: 421-6 and Jensen MP, Karoly P. 1991; 59:431-8). However, this study reports the role of personality traits, emotional expression and coping strategies in neurosurgical patients (Spinhoven P, Paul A, Jochems PA, et al. 1991; 7: 12-20). The matter of personality is of particular interest because although the factor has been shown to be important in determining the response to chronic pain, its role in acute pain

states is less well established. Moreover different coping behaviors are known to influence the extent to which pain affects patients in their daily activities and emotional states. Factors relating to individual differences may be important in determining the ability to cope. The relevance of personality to coping may be evident in that, when in pain, some patients become distressed or unstable, whereas others remain resilient (O'Brien TB, DeLongis A. 1996; 64: 775-813). Personality may explain why some patients can and some cannot control or endure their emotional condition.

POPULATION PERSPECTIVE OF PSYCHOLOGICAL DISTRESS AND MENTAL DISORDERS

Viewing the situation from a public health perspective (i.e. a population perspective), rather than a clinician's perspective, we see the situation as follows:

Although there are no reliable data on the number of people with mental health problems in the tsunami-affected countries, estimates can be made. These rates vary with the setting (e.g. involving socio-cultural factors, current and previous disaster exposure) and assessment method and give a rough indication of what WHO(World Health Organization) expects the

extent of the morbidity and distress to be. There are three groups of psychological distress each requiring a different response:

(1) People with mild psychological distress that resolves within a few days or weeks: A very rough estimate would be that perhaps 20-40% of the tsunami-affected population falls in this group. These people do not need any specific intervention.

(2) People either with moderate or severe psychological distress that may resolve with time or with mild distress that is chronic: This group is estimated to be 30-50% of the tsunami-affected population. This group covers people that tend to be labeled with psychiatric problems in many surveys involving psychiatric instruments that have not been validated in the local cultural and disaster-affected context. This group would benefit from a range of social and basic psychological interventions that are considered helpful to reduce distress.

(3) People with Mental Disorders

(a)MILD AND MODERATE MENTAL DISORDER: In general populations, 12-month prevalence rates of mild and moderate common

mental disorders (e.g. mild and moderate depression and anxiety disorders, including Post-traumatic Stress Disorder (PTSD)) are on average about 10% in countries across the world (World Mental Health Survey 2000 data). This rate is likely to rise – possibly to 20% after exposure to severe trauma and resource loss. Over a number of years, through natural recovery, rates may go down and settle at a lower level, possibly at 15% in severely affected areas. Thus, in short, as a result of a disaster, the population rates of disorder are expected to go up about 5- 10%. A misconception is that PTSD is the main or most important mental disorder resulting from a disaster. PTSD is only one of a range of (frequently co-morbid) common mental disorders (mood and anxiety disorders), which tend to make up the mild and moderate mental disorders, and which become more prevalent after a disaster. The low level of help-seeking behavior for PTSD symptoms in many non-western cultures suggests that PTSD is not the focus of many trauma survivors.

(b)SEVERE MENTAL DISORDER: Severe mental disorder that tends to severely disable daily functioning (psychosis, severe depression, severely disabling anxiety, severe substance abuse, etc.) is approximately 2-3% among general populations of countries across the world (World Mental Health Survey 2000 data). People with these disorders may experience

inability to undertake life-sustaining care (of self or of their children); incapacitating distress; or social unmanageability. The 2-3% rate may be expected to increase (e.g. to roughly 3-4%) after exposure to severe trauma and loss. Trauma and loss (a) may exacerbate previous mental illness (e.g. it may turn moderate depression into severe depression), and (b) may cause a severe form of trauma-induced common mental disorder in some people.

It is evident that personality can affect every significant behaviour of a person. Since a natural disaster like tsunami can have an impact on the personality of study on the present topic is appropriate. Numerous studies surrounding personality and interests have been conducted in the past (Momberg, C. 2005). These studies were only conducted on American, European and African samples among in the general populations. A need therefore exists to put this topic among the Tsunami affected Youth, as will be discussed in the following paragraphs.

Background of Job selection

Congruence between an individual's personality style and his or her job selection has shown to be positively related to job satisfaction (Assouline & Meir, 1987; Spokane, 1985). In this specific context of vocational

psychology the idea of congruence is derived from Holland's theory of vocational choice. This theory is based on two statements. The first is that the choice of vocation is an expression of personality (Holland in Jagger & Neukrag, 1992). This implies that an individual's vocational interests and therefore choice stems from his/her personality. The second statement is that vocational satisfaction and achievement depend on the congruence between an individual's personality and work environment (Holland in Jagger & Neukrag, 1992). Therefore, by congruence the degree of fit between personality and environment is implied. In other words, individuals tend to do best in those environments which correspond most closely with their personalities, since such environments provide them with the most opportunities, offer meaningful compensation and best fulfill their needs. This would imply that one must choose a career in which the work environment will best correspond with one's personality type (Holland in Stead & Watson, 1999:56).

In a study conducted by Brackney (1991) it was discovered that congruence between Holland's personality types and occupation chosen, predicted satisfaction with that occupation 10 years later. Other studies also found a strong relationship between congruence between an individual's personality

and work environment on the one hand and job satisfaction on the other (Elton & Smart, 1988; Smart, Elton & McLaughlin, 1986).

The Influence of the Environment on Personality, Vocational Interests and Vocational Choice

When making a vocational choice it is not only personality that influences the choice, but also vocational interests and the environment. This can be explained as a triadic relationship (between personality, vocational interests and vocational choice) which takes place within the broader context (environment). Here, the environment facilitates and influences the triadic relationship. Firstly, the environment influences the development of personality and vocational interests. But secondly it also determines the availability of career options that individuals can decide between. This implies then that on the one hand the individual has his/her unique composition of needs, while, on the other hand the environment has its own needs, opportunities and facilities (Potgieter, 1983). By implication, congruence between personality and the work environment is possible in an environment in which career possibilities are wide.

Not only is the availability of job opportunities tied to the environment, but also the development of interest. Interests are tied to learning experiences, opportunities and exposure during a person's life (Stead & Watson, 1999:97). According to this viewpoint, the vocational choice is directly linked to the goals and activities that develop out of interest.

Definition of Technical Terms

The focus of this study was on the relationship between human attributes such as personality traits and vocational interests.

Personality – For the purpose of this study, personality is defined by the sixteen Factor of personality. These sixteen factors include Reserved verses warm, Concrete verses Abstract, Reactive verses Stable, Submissive verses dominant, Restraint verses Lively, Expedient verses Rule-conscious, Shy verses Socially bold, Utilitarian verses Sensitive, Trusting verses Suspicious, Practical verses Imaginative, Forthright verses Private, Self-assured verses Apprehensive, Traditional verses Open to change, Group-oriented verses Self-reliant, Unexacting verses Perfectionistic, Relaxed verses Tense.

Interest – For the purpose of this study, interest is defined by the ten vocational interest fields. These ten interest fields include Physical Science, Biological Science, Computations, Business, Executive, Persuasive, Linguistic, Humanitarian, Art, Music.

16 PF is one of the most widely used tests of normal personality in the world. All the traits are bipolar, in other words on the one pole, there is a low indication of the trait and on the other pole there is a high indication of the trait. The Bipolar descriptions shows in the Table 1.1

Table 1.1

The Sixteen Personality Factors measured by the 16PF

FACTOR	LOW SCORE	HIGH SCORE
A	Reserved, detached, critical, aloof, stiff *Sizothymia*	Outgoing, warmhearted, easygoing, participating *Affectothymia*
B	Dull *Low intelligence*	Bright *High intelligence*
C	Affected by feelings, emotionally less stable, easily upset, changeable *Lower ego strength*	Emotionally stable, mature, faces reality, calm *Higher ego strength*
E	Humble, mild, easily led, docile, accommodating *Submissiveness*	Assertive, aggressive, competitive, stubborn *Dominance*
F	Sober, taciturn, serious *Desurgency*	Happy-go-lucky, enthusiastic *surgency*

G	Expedient, disregards rules *Weaker superego strength*	Conscientious, persistent, moralistic, staid *Stronger superego strength*
H	Shy, timid, threat-sensitive *Threctia*	Venturesome, uninhibited, socially bold *Parmia*
I	Tough-minded, self-reliant, realistic *Harria*	Tender-minded, sensitive, clinging, overprotected *premsia*
L	Trusting, accepting conditions *Alaxia*	Suspicious, hard to fool *Protension*
M	Practical, "down-to-earth", concerns *Praxernia*	Imaginative, bohemian, absent-minded *Autia*
N	Forthright, unpretentious, genuine but socially clumsy *Artlessness*	Astute, polished, socially aware *Shrewdness*
O	Self-assured, placid, secure, complacent, serene *Untroubled adequacy*	Apprehensive, self-reproaching, insecure, worrying, troubled *Guilt proneness*
Q_1	Conservative, respecting traditional ideas *Conservatism of temperament*	Experimenting, liberal, free-thinking *Radicalism*
Q_2	Group dependent, a "joiner" and sound follower *Group adherence*	Self-sufficient, resourceful, prefers own decisions *Self-sufficiency*
Q_3	Undisciplined self-conflict, lax, follows own urges, careless of social rules *Low self-sentiment integration*	Controlled, exacting will power, socially precise, compulsive, following self-image *High strength of self-sentiment*
Q_4	Relaxed, tranquil, torpid, unfrustrated, composed *Low ergic tension*	Tense, frustrated, driven, overwrought *High ergic tension*

(Adapted from Manual for the 16PF, The Institute for Personality and ability testing, Illinois).

The descriptions of Thurston's Interest schedule shows in the Table 1.2

Table 1.2

The Ten Interest Fields measured by the Thurston's Interest Schedule

Physical Science	Interested in technical and mechanical equipment, machinery, physics, chemistry, etc
Biological Science	Interested in science, facts, medical and related work
Computations	Interested in numeric analysis, data analysis, etc
Business	Interested in business activities
Executive	Interested in administrative and office work
Persuasive	Dynamic persuasive nature, example management, sales, negotiator, preacher, etc
Linguistic	Interested in literature, journalism, research, etc
Humanitarian	Caring nature, example social work, counselling, education, nursing, etc
Artistic	Interested in art, creative handwork, etc
Music	Interested in singing, writing a song and compose a music etc.

Need for the Study

The purpose of this study was to examine the relationship between personality and vocational interest among tsunami affected youth won. This study was conducted using secondary data comprised of a sample of Tsunami affected youth who were enrolled for the skill development training camp, which were conducted by Nehru Yuva Kendra - Pondicherry (a

Government of India organization). Most of the youth who enrolled for these training camps desired assistance related to Tsunami counseling and career guidance.

No prior study was found that explored the relationship between personality and occupational interest among tsunami affected youth. Ultimately, the purpose of studying all of these variables together with a sample of tsunami affected youth was to identify the normal of relationship that would provide the basis for vocational guidance. By focusing on the improvement of work and careers of tsunami affected youth, it is hoped that they can seek a happier, better-adjusted life. Poor psychological adjustment reduces the quality of life for the individual and places additional financial stress on already burdened social services as youth seek help with their problems. It is useful that the finding of this study also has matched with the youth who have been affected by other natural calamity.

CHAPTER II

REVIEW

Introduction

It is well known that the personality of a person influences her/his vocational interest. However the nature of such relationship among the Tsunami affected youth is not available. Hence the available research in this as new forms the content of the present Chapter.

Although the constructs of personality and interests form two distinct fields in psychology, many theorists have portrayed these two constructs as entwined human qualities (Staggs, Larson & Borgen, 2003:244). Within the field of vocational counselling, most psychologists agree that vocational interests and personality traits are related; however the nature of the relationship is ambiguous (Zagar *et al.*, 1983:203).

The proposed relationship between these two variables is important for two reasons. Firstly, if an overlap does exist, it enables a counsellor to make assumptions about the personality of a client from interest inventory results

or to make assumptions about interests given a client's personality structure. Without empirical support for this overlap, making any assumptions about personality from interests, or vice versa, is extremely risky. Secondly, an overlap can lead to a reduction in testing time in situations when information about personality and interests is beneficial (Pietrzak & Page, 2001:2).

The nature of this relationship is characterised by two points of view. The first viewpoint is that interests are a manifestation of personality traits. Aiken (1994:211) argued that a contemporary conception of interest is that they are reflections or expressions of deep-seated individual needs and personality traits. According to this view, vocational selection is therefore influenced by personality traits. Similarly, Anastasi and Urbina (1997:386) views interests as expressions of individual personality traits. In other words, the nature and strength of one's interests represent an important aspect of one's personality. Owen and Taljaard (1995:428) also interpreted interests as a facet of personality.

The second viewpoint is that a career decision which was based on a careful match with one's personality and/or interests, leads to higher job satisfaction. Greenhaus *et al.* (2000:43) argued that people who choose

career fields that are compatible with their interests tend to be more satisfied with their jobs. According to Nordvik (1994), people have differential preferences for coping, which they have to exercise in order to do and feel well in their work and life situation. This viewpoint is also in line with various theories of vocational choice or career psychology, including the trait-factor theory of Holland.

Ackerman (1997) proposed two reasons why the study of the relationships between interests and personality traits are important. Firstly, it is a common scientific goal to investigate the relationships between different constructs. This strategy may result in new scientific discoveries. Secondly, the study of the relationships between interests and personality traits will reveal what they have in common and what unique information they can provide. Ackerman (1997) argued that this information is potentially useful in the career counselling context.

Studies on Personality and Vocational Interest

In 2002, Larson, Rottinghaus, and Borgen conducted a meta-analysis of 12 studies that explored Holland's theory of personality and the five-factor

model as operationalized by Costa and McCrae. These authors believed it was time to analyze the totality of the research in this area. They stated that most of the studies conducted had produced fairly significant results but none had taken the time to see what the full body of research had to say about the linkage between the interest and personality domains within an individual. In this section, the finding of Larson, Rottinghaus, and Borgen (2002) is explored. Some of the specific studies cited in their meta-analysis are reviewed, as well as other studies not included in their meta-analysis.

Larson, Rottinghaus, and Borgen (2002) found five substantial and expected correlations for men and women among the interest and personality domains. Across these 12 studies the following expected correlations were significant: 1) Artistic–Openness (*r* =.48); 2) Enterprising– Extraversion (*r* =.41); 3) Social–Extraversion (*r* =.31); 4) Investigative–Openness (*r* =.28); and 5) Social–Agreeableness (*r* =.19). They also found four correlations which they deemed unexpected. These correlations were 1) Conventional–Conscientiousness (r =.29); 2) Enterprising–Conscientiousness (r =.29); 3) Enterprising–Neuroticism (r =.24); and 4) Social– Openness (r =.22).

As is typical of most studies conducted in this area, the expected correlations were highlighted as consistent with Holland's hypotheses and the unexpected correlations not overly elaborated upon. Yet, the unexpected correlations did not seem to run completely contrary to Holland's descriptions of the RIASEC types (e.g., those with Conventional preferences would likely be conscientious, and Social individuals would commonly be open).

An overview of relevant studies: The significant correlations found in studies that explored the relationship between Holland's RIASEC types and the five-factor models are presented in Table 2.1. This table shows how many correlations were consistent across studies. Other correlations only appear in one or a few studies. This is assumed to be an artifact of the varying methodology and sampling procedure applied in the different studies.

Points from the literature: An interesting aspect of many of these articles is the way in which statistical findings were reported. Many of the authors seemed to highlight in the narrative those significant correlations that fit with Holland's theory and de-emphasized the significant correlations

that did not fit. For example, Holland, Johnston, and Asama (1994) found that the Enterprising interest preference was correlated with Extraversion for men (.41) and women (.51). The authors stated this fact in their results section narrative. Holland (1997) characterized a person with an Enterprising interest preference as sociable, optimistic, excitement seeking, assertive, enthusiastic, and extroverted. To further emphasize how well Extraversion fits with Holland's concept of Enterprising, Costa and McCrae (1992) described a person scoring high in Extraversion as sociable, assertive, excitement seeking, talkative, active, and optimistic. This significant correlation between Enterprising and Extraversion fits with Holland's description of an Enterprising individual.

In the same study (Holland, Johnston, and Asama, 1994), Extraversion was also significantly correlated with Realistic men (.27) and Conventional men (.19). These significant correlations do not seem to fit with Holland's descriptions of Realistic and Conventional individuals. The authors characterized many of the significant correlations as "either insignificant, small, or ambiguous" (p. 335). Holland (1997) characterized a person with a Realistic interest preference as reserved, conforming, and inflexible. He characterized a person with a Conventional interest preference as inhibited,

conforming, and careful. These definitions do not seem to conjure visions of the person fitting Costa and McCrae's definition of Extraversion. Although the correlations between Extraversion and Realistic and Conventional are smaller than those of Enterprising, they are all statistically significant. In interpreting research findings, it is apparent that authors have dismissed some significant correlations because they do not confirm the theoretical assumptions.

Hogan and Blake (1999) conducted a review of the vocational interests and personality literature. These authors made an interesting point about the conclusions of many of the articles they reviewed (which is also true of many of the articles mentioned in this paper). They stated that most of the findings of the research looking at the relationship between personality and interest were consistent. The interesting part was that some of the authors of their respective articles concluded that these moderate correlations were evidence for the hypothesized underlying link between personality and interest. Others concluded that these same moderate correlations in their respective studies showed that these two domains, interests and personality, were fundamentally separate. A quick read of the discussion sections of the

articles found in Table 2.1 would support these observations of Hogan and Blake (1999).

Table 2.1: Correlations among the NEO's Five Personality Factors and Holland's Six Interest Domains across Ten Studies

FFM Dimension	N	E	O	A	C
Studies with Significant correlations for Men					
Costa, McCrae, & Holland (1984) N=217; Adults		-I, S, E	A, -C		
Gottfredson, Jones, & Holland (1993) N=479; Navy trainees	-I, - C	I, S, E, C	-R, I, S	R, I, A, S, C	R, I, S, E, C
Holland, Johnston, & Asama (1994) N= 175; Adults	-R, -I, -S, -E, -C	R, E, S, C	I, A, S, E, C		E
Tokar, Vaux, & Swanson (1995) N=91; College Students		R, A, S, E	I, A, S		-A
Tokar & Swanson (1995) N= 146; Adults		A, S, E	-R, A, S, -C		C
Schinka, Dye, & Curtiss (1997) N= 389; Adults		S, E	I, A, E	S	-S, -E
De Fruyt & Mervielde (1997) N= 498; College Students	-R, A, -E, -C	R, S, E, C	A, S	S, -E	-A, E, C
Careless (1999) N = 48; Adults	-S	S, E	A, S		E, C
Studies with Significant correlations for Women					
Costa, McCrae, & Holland (1984) N=144; Adults		E	A, I, -C		
Gottfredson, Jones, & Holland (1993) N=246; Navy trainees	-R, -I, -S, -E, -C	A, S	R, I, A, S, -C	E	R, I, C
Holland, Johnston, & Asama (1994) N= 123; Adults	-E	S, E	R, I, A, S		E, C
Tokar, Vaux, & Swanson (1995) N=102; College Students	-R, -E	S, E	R, I, A, S, E	S	
Tokar & Swanson (1995) N= 213; Adults	-E	A, S, E	R, I, A, S, -C	S	E
Schinka, Dye, & Curtiss (1997) N= 645; Adults	-I, -C	E, I, -A	-E, I, A	S	I, C
De Fruyt & Mervielde (1997) N= 436; College Students	-S, -E, -C	R, A, S, E	R, A, S	S, -E	E, C
Careless (1999) N = 91; Adults		S, E	I, A, -C		S, E
Studies with Significant correlations for Men and Women					
Larson & Borgen (2002) N= 323; Adolescents		S, E, C	I, A, S	S	S
*Fritzche, McIntire, & Yost (2002) N= 455; College Students				I, S	I, S
*Sullivan & Hansen (2004) N=217; College Students		S, E	A	S	

* not used in the Larson, Rottinghaus, and Borgen (2002) meta-analysis
- indicates an inverse relationship

Although numerous studies were conducted on this topic, most of them were conducted in the United States of America (USA) (Larson, Rottinghaus and Borgen (2002); Staggs, Larson & Borgen (2003); Zagar, Arbit, Falconer & Friedland (1983); Zak, Lindley and Borgen (2000) and Europe (Nordvik (1994); Zak, Meir and Kraemer (1979)). Studies conducted in South Africa before 1990, used mostly white samples. After the 1990's little research has been conducted. One of the few studies conducted was that of De Bruyn (2002).

De Bruyn (2002) examined the relationship between vocational interests (as measured by the 19-Field-Interest Inventory - 19FII) and basic personality traits (as measured by the 16 Personality Factor Questionnaire -16PF). The interest fields of the19FII were related to the second order factors of the 16PF by means of a factor extension analysis (De Bruin, 2002: 49-52). The participants were 1502 first year university students at a South African university. The mean age of the students was 18 years and there were approximately equal numbers of males and females (De Bruin, 2002:50). Regarding gender, his sample was representative of the South African population where 51% are female and 49% are male.

The results showed that extroverts tend to be interested in fields related to social contact and the influencing of other people, i.e. sociability and public speaking. Emotionally sensitive individuals tend to be interested in the arts and languages as well as the welfare of others. Independent individuals tend to be interested in creative thinking, suggesting that they like to generate alternative and new ideas (De Bruin, 2002: 49-52).

De Bruin's (2002:51) results indicated the existence of relationships between interest fields and personality factors. However, he described these correlations between personality factors and interest scales as relatively weak. He even went as far as stating that personality traits and vocational interests appear to represent two clearly different domains of behaviour in South Africa.

Christine Momberg (2005) had studied to determine if there was a relationship between personality traits and vocational interests in the South African context. A sample of 770 subjects completed the Sixteen Personality Factor Questionnaire (16PF) and the Interest Questionnaire (INQ). The Pearson's r indicated a number of low and moderate correlations between the factors on the 16PF and interest fields of the INQ. Partial

correlations conducted showed that gender and race may influence these relationships, however these were slight changes. It was evident that a relationship exists between personality and vocational interest but seemed to be weaker in the South African context than those found in studies conducted in Europe and the United States of America. The mean age of the sample used in that study was 31.21.

Some difference among these studies is the measuring instruments used. For the current study, the Thurston's Interest schedule is used to measure vocational interests and the first order factors of the 16PF to operationalise personality traits. Since the first order factors of the 16PF are used instead of the second order factors, the range of personality factors used in this study is wider. It is also correlated with less interest scales; since the Thurston's Interest schedule consist of 10 interest fields. Thus, from the findings indicated in the above-mentioned studies, it seems quite possible that this study's hypothesis will be supported by the data.

Although researchers started to question the relevance of indigenous theories and instruments for Europe, United States and South Africa, no previous

research has been conducted for the Tsunami affected Youth in India or other countries.

Conclusion

In this chapter, the possible relationship between personality traits and vocational interests was analysed according to two perspectives. The first perspective was that personality and vocational interests are unrelated concepts. Not much evidence for this perspective was found. The second perspective was that personality and vocational interests are related and correlated concepts. The evidence for this perspective were in abundance and exceptionally significant.

CHAPTER III

METHODOLOGY

Introduction

The previous chapter furnished in previous research pertaining to the variables of the present study. It also helped in identifying the gaps in knowledge requiring further research. Accordingly the present study won formulated.

The present chapter furnishes the technical aspects like the problem in the hypotheses, the tools used to collect the required data, the sample and the statistical analysis to use in this study.

Research Approach and Design

The approach of this study was a basic associational / correlational approach. It determines whether and to what degree variables are related. In other words, relationships among two or more variables are studied without any attempt to influence them (Rao, n.d). This approach was relevant as this study attempted to find an association between the two variables personality

traits and vocational interests and to determine to what degree these variables are related.

Research Question

The specific research question pertaining to this project can be stated as:

Is there a relationship between personality and vocational Interest among Tsunami affected youth?

The aim of this study can therefore be to obtain a clear picture on the existence and nature of the relationship between personality traits and vocational interest among Tsunami affected youth. For this study, the Sixteen Personality Factor Questionnaire (16PF) is used to measure personality traits and the Thurston's Interest Schedule to measure vocational interests.

From the above research question the following hypotheses were derived:

H_1 : There is a significant relationship between personality and vocational Interests

H_0 : There is no significant relationship between personality and vocational Interests

Population and Sample

Table 3.1 shows the Tsunami affected population in Pondicherry. In which nearly half of the population exist to be Youth. Our Sample was taken from this youth population in Pondicherry but not included with Karaikal region. Tables 3.1 show that the twenty thousand people were affected by Tsunami in Pondicherry region, in which less than thirteen thousand people exist to be Youth. Youth age ranged to be 16 to 35. The study sample was taken from this Youth population.

Table 3.1

Tsunami Damages - an overview in Pondicherry

Sl. No.	Particulars	Pondicherry	Karaikal	Total
1	No. of villages affected	15	19	34
2	People affected	26,000	17,432	43,432
3	No. of person died (Total)	107	494	601
	(I) Men	21	77	98
	(II) Women	55	165	220
	(III) Children	31	252	283
	Male Children	8	103	111
	Female children	23	149	172
	Men : Women 1: 2.25			
	Male Children : Female children 1: 1.5			
4	No. of women rendered widows	11	26	37
5	No. of Destitutes	0	3	3
6	No. of Orphaned			
	Children	0	26	26
	Adolescents	2	11	13
	Total	2	37	39
7	No. of persons missing	6	28	34
8	No. of persons injured	299	772	1,071

Source:
DEPARTMENT OF REVENUE & DISASTER MANAGEMENT, GOVERNMENT OF PUDUCHERRY

The population used for this study was the secondary data set mentioned above. The complete data set consisted of 71 subjects. The sample used was a purposive sample drawn from the data set using the individuals that had completed both the 16PF as well as the Thurston's Interest Schedule. The

rationale for this was that this research study was only relating the variables vocational interests (measured by the Thurston's Interest Schedule) and personality traits (measured by the 16PF); therefore, all other data was discarded. In total, the sample then consisted of 71 subjects (N=71). The biographical composition of the sample is described below:

Table 3.2

Biographical composition of the sample

Gender	Participants	Percent
Male	29	40.8
Female	42	59.2
Total	71	100

The majority of the sample were females (N=42). This indicates that this sample is not truly representative of the Coastal area of Pondicherry population regarding gender.

Tools

The Sixteen Personality Factor Questionnaire (16PF) Form A was used to measure personality traits and the Thurston's Interest Schedule to measure vocational interests.

16 Personality Factor Questionnaire (16PF)

Raymond B. Cattell made extensive use of factor analysis and identified a list of about twenty primary personality traits. He selected sixteen of these traits to be included in a personality questionnaire for adults. He called this the 16 Personality Factor Questionnaire (16PF). It is one of the most widely used tests of normal personality. All the traits are bipolar, in other words on the one pole, there is a low indication of the trait and on the other pole there is a high indication of the trait (De Bruin, 2001:233-234). It was developed for persons 17 years and older, out of any racial group that is English or Indians and has a formal education of at least high school study (or equivalent). The reliability coefficient reported for Form A is between 0.35 and 0.85. The reliability coefficient for males and females relates closely to the total group.

The Table 3.3 helps to the reader to study analysis about the personality factors in short form.

Table 3.3

The 16 Bipolar Traits of the 16PF

LOW SCORE	FACTOR	HIGH SCORE
Reserved	A	Warm
Concrete	B	Abstract
Reactive	C	Stable
Submissive	E	Dominant
Restraint	F	Lively
Expedient	G	Rule-conscious
Shy	H	Socially bold
Utilitarian	I	Sensitive
Trusting	L	Suspicious
Practical	M	Imaginative
Forthright	N	Private
Self-assured	O	Apprehensive
Traditional	Q_1	Open to change
Group-oriented	Q_2	Self-reliant
Unexacting	Q_3	Perfectionistic
Relaxed	Q_4	Tense

Only the primary factors of the 16PF were correlated with the Thurston's Interest Schedule. Secondary factors were totally discarded.

Thurston's Interest Schedule

Unlike the theory of Holland that distinguishes between six types of interests, the Thurston's Interest Schedule makes provision for ten interest fields.

At the school level, a very simple tool called Thurston's Interest Schedule is used. This has the advantage of simplicity. The test has 100 squares obtained from 10 columns and 10 rows. The ten columns stand for 10 areas of interest. Each of the squares shows two occupations. The reader selected from this squares with their possible occupations. The task is to choose the one that appeals the most to the respondent. As mentioned earlier, there has not been any research done on this Schedule.

Statistical Analysis

Summary statistics was used to describe the sample. Correlation analysis was conducted to asses the relationship between the two variables. Biographical data are presented in the form of summary statistics. These presentations give the reader a quantitative description of the sample and its characteristics. Gender is represented in frequency tables.

A parametric bivariate test for association was used to test the hypothesis H_1. Since the data complied with the requirements for parametric associational tests, the appropriate test to use was Pearson's correlation coefficient. This determined if there was a relationship and the significance of the relationship (Morgan & Griego, 1998: 84). This analysis is relevant as it was in line with

the objective of this study which was to find a relationship between vocational interests and personality traits.

T-test is used to compare the difference in Vocational Interest between two groups on a different gender. Form the t-test analyzes the difference between these two means to determine whether the difference is statistically significant. The t-test gives the probability that the difference between the two means is caused by chance. It is customary to say that if this probability is less than 0.05, that the difference is 'significant', the difference is not caused by chance.

Stepwise regression is used to removes and adds variables to the regression model for the purpose of identifying a useful subset of the predictors. It could be that only a few potential variables really affect the outcome. If this is suspected to be the case, then stepwise regression can be appropriate. Starting with the null model, successive models are created, each one using one more regressor than the previous model.

To pick which regressor to use for the next model, each of the unused regressors in turn is tried out by adding it to the current model. The P-value of the trial model as a “full model” vs. the current model as a “reduced model” is found, and the model with the best (smallest) P-value found this way is used. However, if no P-value is better than the “P-value cutoff” that was specified, the stepwise method stops, and declares the current model as the end result. (Of course, the stepwise method will also stop if all possible regressors have been used up.).

Conclusion

The aim of this chapter in relation to the overall purpose of this study was to provide a detailed description of all the technical aspects which was involved in conducting the study. It was determined that this was a quantitative research study with a basic associational research design that related the two variables, personality traits and vocational interests. The data gathering procedure was described as a secondary data set from which the sample of 71 subjects (N=71) was drawn. The measuring instruments were identified as the 16PF (for personality traits) and the Thurston’s Interest Schedule (for vocational interests).

CHAPTER IV

ANALYSIS AND DISCUSSION

Summary statistics was used to describe the sample. Since the data complied with the requirements for parametric associational tests, the appropriate test to use for H_1 was Pearson's correlation coefficient. This determined if there was a relationship and the significance of the relationship (Morgan & Griego, 1998: 84).

Stepwise regression was used to remove and add variables to the regression model for the purpose of identifying a useful subset of the predictors. And t-test is used to test if significant difference exists in between males and females in their vocational Interests.

Results

Summary statistics for the Thurston's Interest Schedule are presented in Table 4.1. And a bar diagram for the vocational interest of the Tsunami affected Youth is presented in Figure 4.1.

Table 4.1

Summary Statistics for the Interest Schedule

Interest	N	Min	Max	Mean	Std. Deviation
Physical Science	**71**	**0**	**16**	**3.23**	**3.243**
Biological Science	**71**	**0**	**14**	**2.46**	**2.848**
Computations	**71**	**0**	**13**	**2.14**	**2.840**
Business	**71**	**0**	**11**	**2.58**	**2.867**
Executive	**71**	**0**	**13**	**3.56**	**3.912**
Persuasive	**71**	**0**	**14**	**2.13**	**2.966**
Linguistic	**71**	**0**	**14**	**2.69**	**3.254**
Humanitarian	**71**	**0**	**15**	**4.08**	**3.320**
Artistic	**71**	**0**	**11**	**1.97**	**2.261**
Music	**71**	**0**	**17**	**1.92**	**3.148**

Figure 4.1

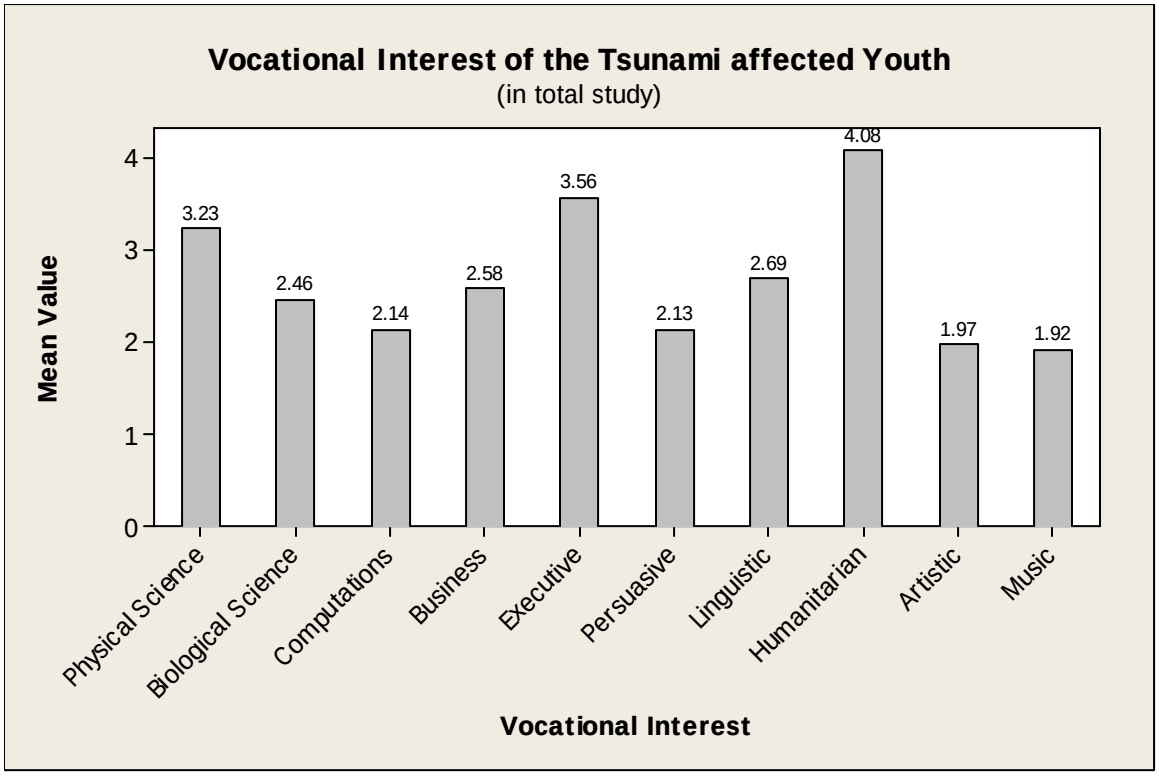

Table 4.1 and Figure 4.1, indicate that the scores on the Thurston's Interest Schedule ranged between 1 and 4. It was determined that the respondents in this sample were mostly interested in Humanitarian (4.08) and Executive occupations (3.56). Respondents in the sample were least interested in Artistic (1.97) and Musical activities (1.92).

Summary statistics for the Thurston's Interest Schedule gender wise is presented below in Table 4.2. And a bar diagram for the vocational interest of the Tsunami affected Youth gender wise is presented in Figure 4.2.

Table 4.2

Summary Statistics for the Interest Schedule in Genderwise

Name of the Vocational Interest	Gender	Number of Youth	Min	Max	Mean	Standard Deviation
***Physical Science**	Male	29	0	16	4.69	3.73
	Female	42	0	12	2.21	2.42
Biological Science	Male	29	0	14	3.07	3.16
	Female	42	0	9	2.05	2.57
***Computations**	Male	29	0	10	2.93	3.14
	Female	42	0	13	1.60	2.51
***Business**	Male	29	0	11	3.90	3.51
	Female	42	0	7	1.67	1.88
***Executive**	Male	29	0	13	5.66	4.04
	Female	42	0	12	2.12	3.13
***Persuasive**	Male	29	0	14	3.17	2.99
	Female	42	0	13	1.40	2.76
***Linguistic**	Male	29	0	14	3.76	3.59
	Female	42	0	12	1.95	2.81
Humanitarian	Male	29	0	14	4.45	3.70
	Female	42	0	15	3.83	3.05
Artistic	Male	29	0	11	2.17	2.87
	Female	42	0	6	1.83	1.75
Music	Male	29	0	17	2.52	4.01
	Female	42	0	11	1.83	1.75

* In the vocational interest field, more or less double the mean difference between males and females

Figure 4.2

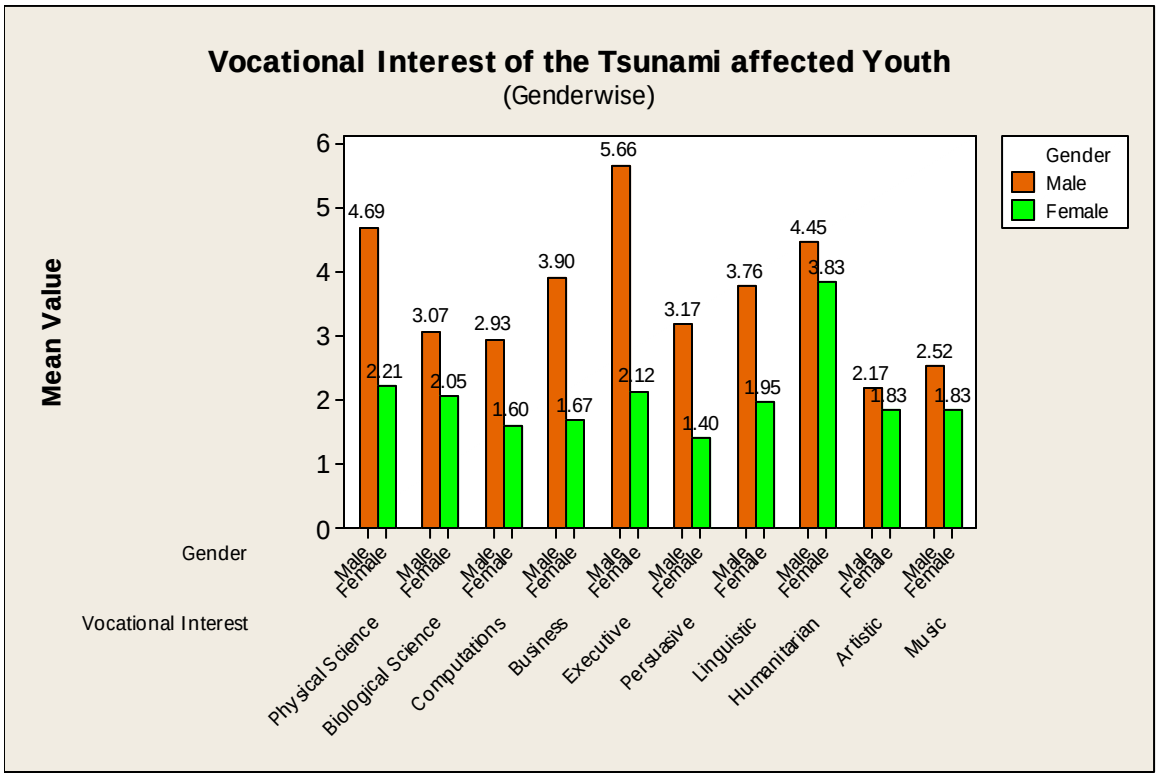

Table 4.2 and Figure 4.2, indicate that the scores on the Thurston's Interest Schedule ranged between 1 and 6. It was determined that the male respondents in this sample were mostly interested in Executive (5.66) and Physical Science occupations (4.69). Male respondents in the sample were least interested in Musical (2.52) and Artistic activities (2.17). But the female respondents in this sample were mostly interested in humanitarian (3.83) and less interested in Persuasive (1.40). More or less double the mean difference between males and females occurred in the six vocational interest

fields of Executive, Physical science, Business, Persuasive, Linguistic and Computational respectively.

Summary statistics for the 16PF is presented in Table 4.3.

Table 4.3

Summary Statistics for the 16PF

Primary Factor	N	Min	Max	Mean	Std. Deviation
A Warmth	**71**	**1**	**10**	**5.90**	**1.889**
B Reasoning	**71**	**1**	**10**	**4.25**	**2.269**
C Emotional Stability	**71**	**1**	**9**	**4.68**	**1.821**
E Dominance	**71**	**1**	**10**	**5.47**	**1.702**
F Liveliness	**71**	**1**	**10**	**4.90**	**1.855**
G Conscientiousness	**71**	**1**	**9**	**5.27**	**2.086**
H Social Boldness	**71**	**1**	**8**	**6.23**	**1.512**
I Sensitivity	**71**	**1**	**10**	**5.51**	**1.935**
L Vigilance	**71**	**1**	**10**	**6.10**	**2.228**
M Abstractedness	**71**	**3**	**10**	**6.11**	**1.910**
N Privateness	**71**	**1**	**9**	**4.96**	**1.719**
O Apprehension	**71**	**1**	**10**	**5.66**	**1.913**
QI Openness to Change	**71**	**2**	**10**	**5.99**	**1.865**
Q2 Self-Reliance	**71**	**1**	**10**	**5.59**	**1.797**
Q3 Perfectionism	**71**	**1**	**10**	**5.76**	**2.045**
Q4 Tension	**71**	**1**	**10**	**5.55**	**1.829**

Summary statistics for the 16PF indicated that most of the respondents obtained average sten scores between four and six. However, the average of factor B was low stained compare with other factors. Thus, the sample

appears to be less reasoning than most people. The high average (more than sten six) on Factor H indicates that the sample might be more in Social Boldness than most people.

The correlations for H_1 are presented in Table 4.4. Only the scales that correlated are presented, the entire correlation table is presents in Annexure A.

Table: 4.4

CORRELATIONS BETWEEN THE 16PF AND THURSTON'S INTEREST SCHEDULE

	Physical Science	Biological Science	Business	Executive	Persuasive	Linguistic	Humanitarian	Artistic
A: Warmth	**0.163**	**-0.097**	**0.114**	**0.065**	**0.206**	**0.087**	**0.255***	**0.245***
Sig. (2-tailed)	0.174	0.421	0.345	0.591	0.085	0.468	0.032	0.039
C: Emotional Stability	**0.049**	**0.284***	**0.074**	**-0.006**	**-0.089**	**-0.079**	**-0.024**	**0.146**
Sig. (2-tailed)	0.688	0.017	0.539	0.960	0.458	0.511	0.845	0.225
I: Sensitivity	**0.194**	**0.117**	**0.264***	**0.178**	**0.080**	**0.070**	**0.055**	**0.143**
Sig. (2-tailed)	0.105	0.333	0.026	0.139	0.506	0.561	0.648	0.235
N: Privateness	**0.012**	**0.007**	**0.062**	**0.105**	**0.254***	**0.201**	**-0.046**	**0.111**
Sig. (2-tailed)	0.918	0.952	0.606	0.384	0.033	0.092	0.703	0.358
Q_1: Openness to Change	**-0.316****	**-0.014**	**-0.242***	**-0.333****	**-0.261***	**-0.270***	**-0.104**	**-0.003**
Sig. (2-tailed)	0.007	0.908	0.042	0.005	0.028	0.023	0.390	0.978
Q_2: Self-Reliance	**-0.125**	**-0.068**	**-0.196**	**-0.104**	**-0.057**	**0.005**	**-0.256***	**-0.059**
Sig. (2-tailed)	0.298	0.573	0.101	0.387	0.638	0.968	0.031	0.627
Q_3: Perfectionism	**-0.219**	**-0.115**	**-0.085**	**-0.297***	**-0.096**	**-0.037**	**-0.045**	**-0.017**
Sig. (2-tailed)	0.067	0.341	0.480	0.012	0.428	0.761	0.709	0.889

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Table 4.4 shows that there are a number of statistically significant relationships between the 16PF factors and the Thurston's Interest Schedule interest fields.

Factor Q1 (openness to change) correlated significantly with most interest scales, but noticeably all in negatively correlated with the Executive interest scale ($r = -0.333$; $p = 0.005$), Physical Science ($r = -0.316$; $p = 0.007$), Linguistic ($r = -0.270$; $p = 0.023$), Persuasive ($r = -0.261$; $p = 0.028$) and Business Scale ($r = -0.042$).

Moderately negative correlation was also obtained between Factor Q_3 and the Executive ($r = -0.297$; $p = 0.012$) interest scale. Factor Q_2 (Perfectionism) showed a moderate negative correlation with the Humanitarian interest scale ($r = -0.256$; $p = 0.031$).

Moderately positive correlations were obtained between Factor A and the Humanitarian ($r = 0.255$; $p = 0.032$) interest scale. It also showed a moderate positive correlation with the Artistic ($r = 0,245$; $p = 0.039$) interest scale.

Factor C (emotional stability) indicated positive correlations with the Biological ($r = 0.284$; $p = 0.017$) Interest Scale.

Factor I (Sensitivity) indicated positive correlations with the Business ($r = 0.245$; $p = 0.039$) Interest Scale.

Other correlation was Factor N (Privateness) that correlated positively with the Persuasive interest scale ($r = 0.254$; $p = 0.033$).

No significant correlations were obtained between Factor B (reasoning) and any field of interest and neither with Factor E (Dominance), nor Factors F (Liveliness) and Factor G (Conscientiousness). And also Factor H (Social Boldness), Factor L (Vigilance), Factor M (Abstractedness), Factor O (Apprehension) and Factor Q_4 (Tension) have no correlations with any field of interest in the vocational interest scale.

The results reveal that:

(1) Personality traits correlated with Executive were Q_1- (openness to change) and Q_3- (Perfectionism).

(2) The Personality trait that correlated with Physical Science was Q_1- (open to change).

(3) The Personality trait that correlated with Linguistic was Q_1- (open to change).

(4) The Personality trait that correlated with Humanitarian were A+ (warm) and Q_2- (Self-Reliance).

(5) The Personality trait that correlated with Artistic was A+ (warm).

(6) The Personality trait that correlated with Biological science was C+ (Emotional Stability).

(7) The Personality trait that correlated with Business were I+ (Sensitivity) and Q_1- (open to change).

(8) The Personality trait that correlated with Persuasive were N+ (Privateness) and Q1- (open to change).

(9) No personality traits were correlated with Computational and Music.

In particular, seven specific personality dimensions of the 16PF seemed to be correlated to interests on the Thurston's Interest Schedule. The seven specific personality dimensions of the 16PF that are correlated to interests on the Thurston's Interest Schedule, were the following.

FACTOR Q1 (openness to change): Has to do with a person's orientation to change, novelty, and innovation (Business Development Group, 2001). But this entire factor correlated negatively with Physical Science (r = -0.316), Business (r = -0.242), Executive (r = -0.333), Persuasive (r = -0.261) and Linguistic (r = -0.270) interest scales. This indicates that individuals who score low on this factor (Q1- Conservatism) have an interest in nature, physical activities, plants and nature. The person who scores low on Factor Q_1 is confident in what he has been taught to believe, and accepts the "tried and true," despite inconsistencies, when something else might be better. He is cautious and compromising in regard to oppose and postpone change, is inclined to go along with tradition, is more conservative in religion and politics, and tends not to be interested in analytical "intellectual" thought.

FACTOR Q_3 (Perfectionism): It has to do with two related qualities: Low integration versus High self-concept control, and to follow own urges versus following self-image. This factor correlated negatively with the Executive (r = 0.297) interest scale. This indicates that individuals who score low on factor (Q_3- Perfectionism) will not be bothered with will control and regard for social demands. He is not overly considerate, careful, or painstaking. He may feel maladjusted, and much maladjustment (especially the affective,

but not the paranoid) show Q. This finding was indicated by the Manual for the 16 PF.

FACTOR Q_2 (self-reliant): It has to do with a propensity to seek group support - or to strike out on one's own (Business Development Group, 2001). This factor correlated negatively with the Humanitarian (r = 0.256) interest scale. This indicates that individuals who score low on this factor (Q_2- self-reliant) prefer to work and make decisions with other people, like and depends on social approval and admiration. Youth tend to go along with the group and may be lacking in individual resolution. Youth is not necessarily gregarious by choice; rather needs group support.

Factor A (warmth): Measures a person's emotional orientation toward others - the degree to which contact with others is sought and found rewarding as an end in itself (Business Development Group, 2001). This factor correlated positively with the Humanitarian (r = 0.255) and Artistic (r = 0.245) interest scales. This indicates that individuals who score high on this factor (A+ warm) have a dynamic humanitarian as well as a caring nature. Pietrzak and Page (2001) found similar results in a study they conducted between the

16PF and Holland's typology. They found that individuals who scored high on Factor A had social and enterprising interests.

Factor C (Emotional Stability): It measures a person's ego strength. To a considerable extent, it is a measure of low or high emotional stability in a situation. This factor correlated positively with the Biological Science (r = 0.284) interest scale. This indicates that individuals who score high on this factor (C+ *Emotional Stability*) tends to be emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. Sometimes youth may be a person making a resigned adjustment to unsolved emotional problems.

FACTOR I (sensitivity): Is a complex factor that is difficult to summarize in a single phrase. It has to do with two related qualities: objectivity versus subjectivity, and tough-mindedness versus tender-mindedness (Business Development Group, 2001). This factor correlated positively with the Business (r = 0.264) interest scales. This indicates that individuals who score high on this factor (I+ sensitive) have a caring nature and an interest in literature, journalism and research. This result indicated that emotionally sensitive individuals tend to be interested in the arts and languages.

FACTOR N (privateness): It is about artlessness or shrewdness in response to environmental situation. This factor correlated positively with the Persuasive (r = 0.254) interest scale. This indicates that individuals who score high on this factor (N+ privateness) tend to be polished, experienced, worldly, shrewd. Youth is often hardheaded and analytical. Youth has an intellectual, unsentimental approach to situations.

Scatterplots

Predict can be illustrated through the use of scatterplots. In the Scatterplot diagrams Graph 1 show that these are statistically significant relationships between the 16 Personality factors and the Thurston's Interest Schedule interest fields.

Plotting the data in table 4.4 produces the scatterplot shown from Figure 4.3. Once a scatterplot such as this has been constructed, a straight line, known as a "regression line", can be calculated mathematically. The regression line comes to the closest to all of the scores depicted on the scatterplot of any straight line that could be drawn. We can then use the line as basis for prediction. Now we can understand that the relationship of 16PF and

occupational Interest is true on observing these regression lines to the closest to all of the scores.

Figure 4.3

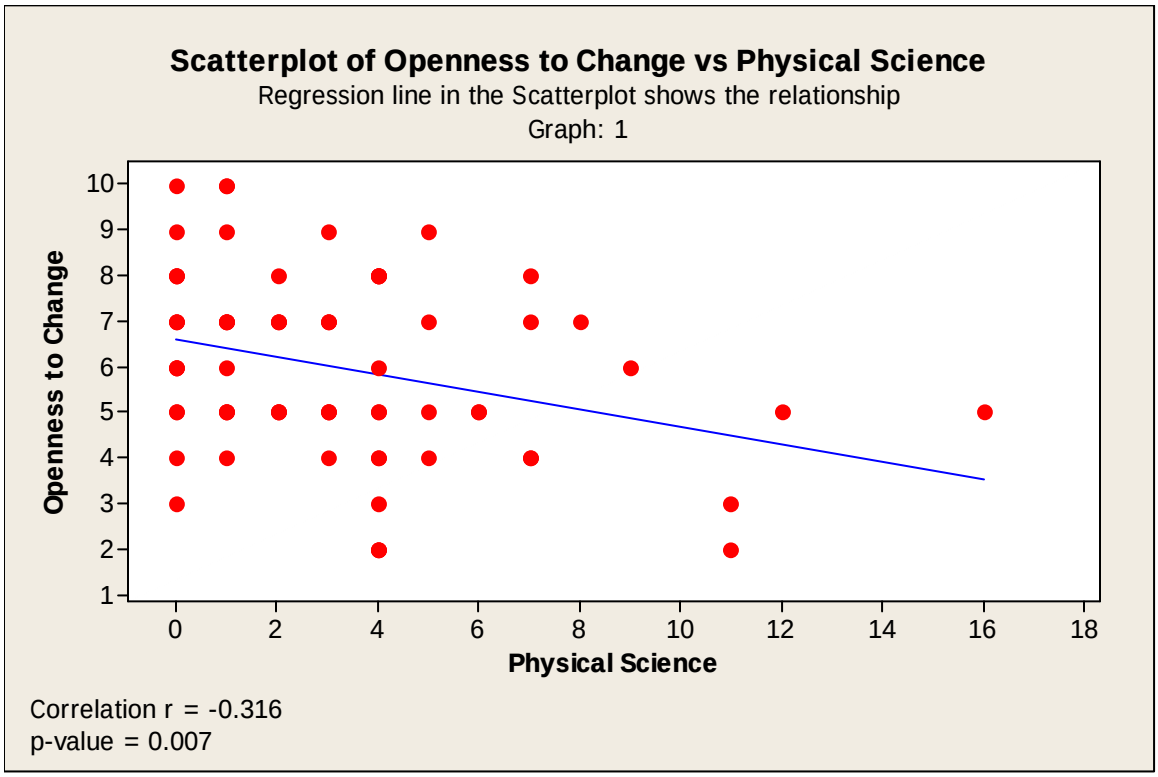

Table 4.5 shows Overall results for Stepwise regression of Vocational interest as dependent variable with independent variables in the total subject group (n=71). And Table 4.6 shows the stepwise regression in short view.

Table: 4.5

Overall results for Stepwise regression of Vocational interest as dependent variable with independent variables in the total subject group (n=71)

Coefficients[a]

Model	Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Dependent Variable
		B	Std. Error	Beta			Zero-order	Partial	Part	
1	(Constant)	6.311	1.174		5.376	.000				Phy. Science
	Q1: Openness to Change	-.515	.186	-.316	-2.768	.007	-.316	-.316	-.316	
2	(Constant)	8.734	1.586		5.508	.000				-do-
	Q1: Openness to Change	-.548	.182	-.336	-3.013	.004	-.316	-.343	-.335	
	Q3: Perfectionism	-.387	.176	-.246	-2.203	.031	-.218	-.258	-.245	
1	(Constant)	.406	.888		.452	.653				Bio. Science
	C: Emotional Stability	.440	.179	.284	2.456	.017	.284	.284	.284	
1	(Constant)	.439	.997		.440	.661				Business
	I: Sensitivity	.388	.171	.264	2.273	.026	.264	.264	.264	
1	(Constant)	7.484	1.407		5.318	.000				Executive
	Q1: Openness to Change	-.655	.223	-.333	-2.934	.005	-.333	-.333	-.333	
2	(Constant)	11.362	1.847		6.151	.000				-do-
	Q1: Openness to Change	-.707	.212	-.359	-3.338	.001	-.333	-.375	-.356	
	Q3: Perfectionism	-.619	.206	-.326	-3.027	.003	-.297	-.345	-.325	

1	(Constant)	4.458	1.092		4.082	.000				Persuasive
	Q1: Openness to Change	-.389	.173	-.261	-2.248	.028	-.261	-.261	-.261	
	(Constant)	2.216	1.513		1.464	.148				-do-
2	Q1: Openness to Change	-.366	.170	-.246	-2.161	.034	-.261	-.253	-.245	
	N: Privateness	.424	.203	.238	2.089	.040	.254	.246	.237	
1	(Constant)	5.333	1.195		4.462	.000				Linguistic
	Q1: Openness to Change	-.442	.190	-.270	-2.329	.023	-.270	-.270	-.270	
	(Constant)	3.545	1.446		2.452	.017				-do-
2	Q1: Openness to Change	-.532	.190	-.325	-2.797	.007	-.270	-.321	-.317	
	O: Apprehension	.411	.196	.243	2.095	.040	.170	.246	.237	
1	(Constant)	6.709	1.254		5.349	.000				Humanitarian
	Q2: Self-Reliance	-.469	.214	-.256	-2.198	.031	-.256	-.256	-.256	
2	(Constant)	3.940	1.802		2.186	.032				-do-
	Q2: Self-Reliance	-.439	.209	-.239	-2.100	.039	-.256	-.247	-.239	
	A: Warmth	.440	.210	.238	2.093	.040	.255	.246	.238	
1	(Constant)	.152	.905		.168	.867				Artistic
	A: Warmth	.308	.147	.245	2.101	.039	.245	.245	.245	

[a] - Dependent Variable

Table: 4.6

Short view of Stepwise regression of vocational interest as dependent variables with independent variables in the total subjects group (n=71). Contribution to Beta value (β) and for level of significance *p* are shown

Independent Variable	Dependent Variable															
	Physical Science		Biological Science		Business		Executive		Persuasive		Linguistic		Humanitarian		Artistic	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
A: Warmth **Sig.**														**.210** *p*=.040	**.245** *p*=.039	
C: Emotional Stability **Sig.**			**.284** *p*=.017													
I: Sensitivity **Sig.**					**.264** *p*=.026											
N: Privateness **Sig.**										**.238** *p*=.040						
O: Apprehension **Sig.**												**.243** *p*=.040				
Q1: Openness to Change **Sig.**	**-.316** *p*=.007						**-.333** *p*=.005		**-.261** *p*=.028		**-.270** *p*=.023					
Q2: Self-Reliance **Sig.**													**-.256** *p*=.031			
Q3: Perfectionism **Sig.**		**-.246** *p*=.031						**-.326** *p*=.003								

Bold numbers are Beta values (β)

Stepwise regression is used to remove and add variables to the regression model for the purpose of identifying a useful subset of the predictors. It could be seen that only a few potential variables really affect the outcome. If this is suspected to be the case, then stepwise regression can be appropriate. Starting with the null model, successive models are created, each one using one more regressor than the previous model.

Table 4.5 shows that the unstandardized beta coefficient of -.515 indicates that as " Q1: Openness to Change " increases by 1 point, "Physical Science" increases by 1. This is called the "slope". The standardized beta coefficient indicates the slope when all variables in the model are converted to z scores prior to the regression analysis. This is beneficial when using variables with different scales (From the test administration, we know that the Personality variable with a range of 1 to 10 and another interest variable with a range of 1 to 20).

To find out which specific personality factor is mainly responsible for relationship to change, we conducted an additional stepwise regression analysis, with various personality factors presented in the questionnaire as the independent variables. The results showed that with a beta of -.333 and -

.326 of respectively FACTOR Q1 (openness to change) and FACTOR Q_3 (Perfectionism), these are the personality factors that are mainly responsible for inducing active relationship in Executive interest. FACTOR Q1 (openness to change) (beta = -.316) and FACTOR Q_3 (Perfectionism) (beta = -.246) are the factors that have the Role of Personality in next largest significant contribution in relationship of physical science interest. For the next support to the relationship of personality and interest are Factor C (Emotional Stability) (.284) and FACTOR Q_2 (self-reliant) (-.256), and for active support Factor A (warmth) (.245) and FACTOR I (sensitivity) (.264).

Table: 4.7 show the summary of t- test between Males and Females in the vocational Interest. We can see that the significant differences are presented in the table.

Table: 4.7

Summary of T-test between Male and Female in the Vocational Interest

Name of the Vocational Interest	Gender	Number of Youth	Mean	Standard Deviation	t - value	Significant
Physical Science	Male	29	4.69	3.73	3.39	0.001
	Female	42	2.21	2.42		
Biological Science	Male	29	3.07	3.16	1.50	Not significant
	Female	42	2.05	2.57		
Computational	Male	29	2.93	3.14	1.99	0.051
	Female	42	1.60	2.51		
Business	Male	29	3.90	3.51	3.47	0.001
	Female	42	1.67	1.88		
Executive	Male	29	5.66	4.04	4.16	0.000
	Female	42	2.12	3.13		
Persuasive	Male	29	3.17	2.99	2.56	0.013
	Female	42	1.40	2.76		
Linguistic	Male	29	3.76	3.59	2.37	0.020
	Female	42	1.95	2.81		
Humanitarian	Male	29	4.45	3.70	0.76	Not significant
	Female	42	3.83	3.05		
Artistic	Male	29	2.17	2.87	0.62	Not significant
	Female	42	1.83	1.75		
Music	Male	29	2.52	4.01	0.98	Not significant
	Female	42	1.83	1.75		

Summary of t-test displays the table 4.7 of the sample sizes, sample means, standard deviations, t-value and significant value for the two samples.

It can be used to compare the difference in Vocational Interest between the two gender groups. There is notable difference between male female in six

vocational interests that the hypothesis test results are significant. The test statistic of six vocational interest fields of Executive, Business, Physical Science, Persuasive, Linguistic and Computations are stated respectively as follows: t value 4.16 (p-value = 0.000), t value 3.47 (p-value = 0.001), t value 3.39 (p-value = 0.001), t value 2.56 (p-value = 0.013), t value 2.37 (p-value = 0.020), t value 1.99 (p-value = 0.051). And the degree of freedom is 69.

Discussion

The alternative hypothesis (H_1) of this study was stated as: ***There is a significant relationship between personality traits and vocational interests.*** The results obtained form this study indicated that there were a number of statistically significant relationships between the 16PF and the Thurston' Interest Schedule.

In particular, seven specific personality dimensions of the 16PF are to be related to interests on the Thurston' Interest Schedule: Physical science, Biological science, Business, Executive, Persuasive, Linguistic, Humanitarian and Artistic. However, all the results discussed were moderate correlations. This current study found meaningful relationships

were (1) Conservative individuals tend to be interested in the executive and physical science as well as interest in physical activities, plants and nature, (2) individuals who will not be bothered with will control and regard for social demands, tend to be interested in executive and (3) Group-oriented youth who tend to go along with the group and may be lacking in individual resolution, selected Humanitarian jobs. And the current study also found at least seven specific personality dimensions that seemed to be related to interests. The larger number of significant correlations may possibly be ascribed to the fact that the first order, instead of second order factors were used in this study.

We conducted an additional stepwise regression analysis. These results indicated that the relationship exists.

The t-test analyzes the difference between these two means to determine whether the difference is statistically significant. It was evident that the T-test on the Thurston's Interest Schedule differed significantly between males and females in Executive, Business, Physical Science, Persuasive, Linguistic and Computational scales. So it is clear that the difference is not caused by chance.

From the t-test analyzes, we see that the gender difference in six vocational interest areas. But four other vocational interest areas do not significant different in gender variation.

CHAPTER V

SUMMARY, DISCUSSION AND CONCLUSION

In the previous chapter the research results of the associational study were tabled and the findings discussed in detail. Final conclusions are drawn and suggestions made in this chapter. The limitations of the study and possible avenues for future research are discussed.

Problem

The specific research question pertaining to this project can be stated as:

Is there a relationship between personality and vocational

Interest among Tsunami affected youth?

Sample

The youth population used for this study was the secondary data and the complete data set consisted of 71 subjects. The sample used was a purposive sample drawn from the data set using the individuals from both gender in the coastal area of Puducherry.

Tools used for the study

The Sixteen Personality Factor Questionnaire (16PF) Form A was used to measure personality traits and the Thurston's Interest Schedule to measure vocational interests.

Statistics used

The data obtained from the present study was analysed using Pearson's correlation and stepwise regression and t-test value.

Summary

The purpose of this study was the to determine if there is a relationship between personality traits and vocational interests as measured by the Sixteen Personality Factor Questionnaire (16PF) and the Interest Schedule (Thurston Interest Schedule) respectively. The rationale to execute this research project was to obtain clear and specific results on the existence and nature of the relationship of personality and vocational interests among Tsunami affected youth. The results obtained concluded that there is a relationship of personality and vocational interests among Tsunami affected youth.

Vocational choice fully difference in the six vocational interest area between males and females.

Conclusions

(1) There is a significant negative relationship exists between Executive interest and Q1 (openness to change) and Q_3 (Perfectionism) of the personality factors.

(2) There is a significant negative relationship exists between Physical Science and Q_1 (open to change) of the personality factor.

(3) There is a significant negative relationship exists between Linguistic and Q_1 (open to change) of the personality factor.

(4) There is a significant positive relationship exists between Humanitarian and A (warm) of the personality factor.

(5) There is a significant negative relationship exists between Humanitarian and Q_2 (Self-Reliance) of the personality factor.

(6) There is a significant positive relationship exists between Artistic and A (warm).

(7) There is a significant positive relationship exists between Biological science and C (Emotional Stability) of the personality factor.

(8) There is a significant positive relationship exists between Business and I (Sensitivity) of the personality factor.

(9) There is a significant positive relationship exists between Persuasive and N (Privateness) of the personality factor.

(10) There is a significant negative relationship exists between Persuasive and Q1 (open to change) of the personality factor.

(11) There is a significant difference exists between males and females among the vocational interest fields of Executive, Business, Physical Science, Persuasive, Linguistic and Computations.

Suggestions

A suggestion for future research is to conduct a study about the Indian youth who have been affected by the other natural calamities and compare with this study.

Possibilities for future research in this area could include the following:

In 16PF, Factor B Reasoning was very low compare with the other personality factors. Further research is needed for finding the cause of low score.

Generally Tsunami affected youth show lower interest in this overall vocational interest study. Vocational Counselors could take further study and find to solve these problems.

Male and female of the Tsunami affected youth have mostly chosen humanitarian related jobs. Researcher could conduct further study to concentrate on this vocational Interest chosen by the tsunami affected youth.

Limitations of the study

A limitation to this study was that since the 16PF and Thurston's Interest Schedule have not been used in any studies related with tsunami affected Youth; it was extremely difficult to compare results.

A further limitation to this study was that the youth population and damages are very low compare with other parts of this country like Cuddalore and Nagapatinam. Larger population and severe tsunami damages had not taken to consider in this study.

In Pondicherry, Fishery community people and Vanniya community people have been lived in side by side of the tsunami affected area. No separate

community based study had been conducted and it was not compared within this study. This is viewed as another limitation to the study.

REFERENCES

1. Abrahams, F. 1996. *Cross-cultural comparability of the 16PF*. Unpublished PhD thesis. Western Cape: University of Western Cape.

2. Ackerman, P.L. 1997. Personality, self-concept, interests and intelligence: which construct doesn't fit? *Journal of Personality*, 65(1):171-204.

3. Aiken, L.R. 1994. *Psychological testing and assessment*. 8th ed. Massachusetts: Allyn and Bacon, Inc.

4. Allport, G.W. & Odbert, H.S. 1936. Trait names: a psycho-lexical study. *Psychological Monographs,* 47(1):211.

5. Anastasi, A. & Urbina, S. 1997. *Psychological testing,* 7th ed. New Jersey: Prentice-Hall, Inc.

6. Arnold, J., Cooper, C.L. & Robinson, I.T. 1995. *Work psychology: understanding human behaviour in the workplace.* 2nd ed. London: Pitman Publishing.

7. Asmundson GJ, Bonin MF, Frombach IK, Norton GR. Evidence of a disposition toward fearfulness and vulnerability to posttraumatic stress in dysfunctional pain patients. *Behav Res Ther* 2000; 38: 801-12.

8. Assouline, M & Meir, E.I. 1987. Meta-analysis of the relationship between congruence and well-being measures. *Journal of Vocational Behaviour*, 31(1):319-332.

9. Bandura A, 1997. *Self-efficacy: the exercise of control*. New York: Freeman

10. Bergh, Z.C. 2003. The foundations of personality. In: Bergh, Z.C. & Theron, A.L. (eds.) *Psychology in the work context.* 2nd ed. Cape Town: Oxford University Press Southern Africa.

11. Bergh, Z.C. & Theron, A.L. 2003. *Psychology in the work context.* 2nd ed. Cape Town: Oxford University Press Southern Africa.

12. Brackney, K.S. 1991. *A follow-up study investigating the relationship between Holland's personality type and selected career choice variables*. Unpublished doctoral dissertation. Norfolk: Old Dominion University.

13. Burger, J.M. 1993. *Personality*. 3rd ed. USA: California, Brooks/Cole Publishing.

14. Cattell, R.B. 1965. *The scientific analysis of personality.* Harmondsworth: Penguin.

15. Claridge G, Davis C. What's the use of neuroticism? Personality and Individual. *Differences* 2001; 31: 383-400.

16. Crites, J.O. 1969. *Vocational psychology: the study of vocational behaviour and development.* USA: McGraw-Hill, Inc.

17. Costa, P. T., Jr., & McCrae, R. R. (1992). *The NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory(NEO-FFI) Professional Manual.* Odessa, FL: Psychological Assessment Resources.

18. Cronbach, L.J. 1990. *Essential of psychological testing.* 5th ed. USA: Harper Collins Publishers, Inc.

19. Davidson, G.W., Seaton, M.A. & Simpson, J. 1994. *Concise english dictionary*. Hertfordshire: Wordsworth Editions Ltd.

20. Davis C. Normal and neurotic perfectionism in eating disorders: an interactive model. *Int J Eat Disord* 1997; 22: 421-6.

21. De Bruin, G.P. 1999. Social cognitive career theory as an explanatory model for career counselling in South Africa. In: Stead, G.B. & Watson, M.B. (eds.). *Career psychology in the South African context.* Pretoria: JL van Schaik Publishers.

22. De Bruin, G.P. 2001. Career counselling assessment. In: Foxcroft, C. & Roodt, G. (eds.) *An introduction to psychological assessment in the South African context.* UK: Oxford University Press.

23. De Bruin, G.P. 2002. The relationship between personality traits and vocational interests. *SA Journal of Industrial Psychology*, 28(1):49-52.

24. De Bruin, G.P. & Du Toit, K. 1995. Die faktorstruktuur van die 19 veldbelangstellingsvraelys en Holland se struktuur van belangstellings. *Journal of Industrial Psychology*, 21(3):24-28.

25. Downie, N.M. 1967. *Fundamentals of measurement*. 2nd ed. New York: Oxford University Press.

26. Elton, C.F. & Smart, J.C. 1998. Extrinsic job satisfaction and personenvironment congruence. *Journal of Vocational Behavior*, 32(2):226-238.

27. Fontana, D. 2000. *Personality in the workplace*. London: MacMillan Press Ltd.

28. Freeman, F.F. 1964. *Theory and practice of psychological testing.* 3rd ed. USA: Holt, Rinehart & Winston, Inc.

29. Greenhaus, J.H., Callanan, G.A. & Godshalk, V.M. 2000. *Career management*. 3rd ed. Orlando: Harcourt, Inc.

30. Hansen, J.C. 2000. Interest inventories. In: Goldstein, G. & Hersen, M. (eds.) *Handbook of psychological asse*ssment. 3rd ed. London: Lawrence Erlbaum Associates, Publishers.

31. Hogan, R., & Blake, R. (1999). John Holland's vocational typology and personality theory. *Journal of Vocational Behavior.Special issue on Holland's theory, 55*(1), 41-56.

32. Holland, J. L. (1997). *Making vocational choices*. Odessa, FL: Psychological Assessment Resources, Inc.

33. Holland, J. L., Johnston, J. A., & Asama, N. F. (1994). More evidence for the relationship between Holland's personality types and personality variables. *Journal of Career Assessment, 2,* 331-340.

34. Hood, A.B & Johnson, R.W. 1997. *Assessment in counselling: A guide to the use of psychological assessment procedures*. 2nd ed. USA: American Counselling Association.

35. Hoppock, R. 1957. *Occupational information: where to get it and how to use it in counselling and teaching*. New York: McGraw Hill.

36. Jensen MP, Karoly P. Control beliefs, coping efforts, and adjustment to chronic pain. *J Consult Clin Psychol* 1991; 59:431-8.

37. Kline, P. 1975. *Psychology of vocational guidance*. London: B.T Batsford Ltd.

38. Langley, R. 1999. Super's theory. In: Stead, G.B. & Watson, M.B. (eds.). *Career psychology in the South African context.* Pretoria: JL van Schaik Publishers.

39. Larson, L. M., & Borgen, F. H. (2002). Convergence of vocational interests and personality: Examples in an adolescent gifted sample. *Journal of Vocational Behavior*, *60*, 91-112.

40. Larson, L.M., Rottinghaus, P.J. & Borgen, F.H. 2002. Meta-analysis of big six interests and big five personality factors. *Journal of Vocational Behaviour,* 61(2):217-239.

41. Louw, DA., Van Ede, D.M. & Louw, A.E. 1998. *Menslike ontwikkeling*. 3de uitgawe. Pretoria: Kagiso Uitgewers.

42. Meyer, W.F., Moore, C. & Viljoen, H.G. 1997. *Personologie: van individu tot ekosisteem.* Sandton: Heinemann Voortgesette Onderwys (Edms) Bpk.

43. Mohta M, Sethi AK, Tyagi A, Mohta A. Psychological care in trauma patients. *Injury* 2003; 34: 17-25.

44. Momberg, C (2005). The relationship between personality traits and Vocational interests in a South African context. Unpublished Master degree dissertation, University of Pretoria: Pretoria.

45. Morgan, G.A. & Griego, O.V. 1998. *Easy use and interpretation of SPSS for windows: answering research questions with statistics.* New Jersey: Lawrence Erlbaum Associates, Publishers.

46. Nadelson, C.C. 2001. *Am I okay? Psychological testing and what those tests mean*. USA: Chelsea House Publishers.

47. Neuman, W.L. 1997. Social research methods: qualitative and quantitative approaches. USA: Allyn & Bacon.

48. Nezami, E. & Butcher, J.N. 2000. Objective personality assessment. In: Goldstein, G. & Hersen, M. (eds.) *Handbook of psychological assessment*. 3rd ed. Oxford: Elsevier Science Ltd.

49. Nicholas, L.; Pretorius, T.B. & Naidoo, A.V. 1999. Historical perspective of career psychology in South Africa. In: Stead, G.B. &

Watson, M.B. (eds.) *Career psychology in the South African context.* Pretoria: JL van Schaik Publishers

50. Nordvik, H. 1994. Relationships between Holland's vocational typology, Schein's career anchors and Myers-Briggs types. *Journal of Occupational and Organizational Psychology,* 69(1):263-275.

51. O'Brien TB, DeLongis A. The interactional context of problem-, emotion-, and relationship-focused coping: the role of the big five personality factors. *J Pers* 1996; 64: 775-813.

52. Owen, K. & Taljaard, J.J. 1995. *Handleiding vir die gebruik van sielkundige en skolastiese toetse van die RGN.* Pretoria: Raad vir Geesteswetenskaplike Navorsing.

53. Potgieter, I.F. 1983. *'n Ondersoek na die beroepsbelangstelling van studente.* Unpublished masters dissertation. Bloemfontein: Universiteit van die Oranje- Vrystaat.

54. Ryckman, M.R. 1997. *Theories of Personality*. 6th Ed. USA: California, Brooks/Cole Publishing.

55. Smart, J.C., Elton, C.F. & McLaughlin, G.W. 1986. Person-environment congruence and job satisfaction. *Journal of Vocational Behavior*, 24(1):216-225.

56. Smit, G.J. 1991. *Psigometrika: aspekte van toetsgebruik*. Pretoria: HAUM Tersiêr.

57. Spinhoven P, Paul A, Jochems PA, et al. The relationship of personality variables and patient recruitment to pain coping strategies and psychological distress in tension headache patients. *Clin J Pain* 1991; 7: 12-20.

58. Spokane, A.R. 1985. A review of research on person-environment congruence in Holland's theory of careers. *Journal of Vocational Behavior*, 26(1):306-343.

59. Staggs, G.D., Larson, L.M. & Borgen, F.H. 2003. Convergence of specific factors in vocational interests and personality. *Journal of Career Assessment*, 11(3):243-261.

60. Stead, G.B. & Watson, M.B. 1998. Career research in South Africa: challenges for the future. *Journal of Vocational Behavior*, 52:289-299.

61. Stead, G.B. & Watson, M.B. 1999. *Career psychology in the South African context.* Pretoria: JL van Schaik Publishers

62. Sternberg, R.J. 1995. *In search of the human mind*. New York: Harcourt Brace College Publishers.

63. Super, D.E & Crites, H.O. 1962. *Appraising vocational fitness by means of psychological tests.* New York: Harper & Row.

64. Taljaard, J.J & Prinsloo, W.B.J. 1995. Persoonlikheidstoetse. In: Owen, K. & Taljaard, J.J. (eds.) *Handleiding vir die gebruik van*

sielkundige en skolastiese toetse van die RGN. Pretoria: Raad vir Geesteswetenskaplike Navorsing.

65. Taljaard, J.J & Prinsloo, W.B.J. 1995. Belangstellingsvraelyste. In: Owen, K. & Taljaard, J.J. (eds.) *Handleiding vir die gebruik van sielkundige en skolastiese toetse van die RGN*. Pretoria: Raad vir Geesteswetenskaplike Navorsing.

66. Van Eden, R. & Prinsloo, C. 1997. Using the South African version of the 16PF in amulti-cultural context. *South African Journal of Psychology*, 27(3):151-159.

67. Van Niekerk, E.C. & Van Daalen, H.J. 1991. Career development on tertiary students: some pertinent issues. *Vista Teaching and Learning*, 6(1):7-13.

68. Vaughan, T.D. 1970. *Education and vocational guidance today.* London: Routledge and Kegan Paul.

69. Visser, B.L. 1977. *Vocational counselling at the NIPR*. Johannesburg: CSIR. Waddington A, Ampelas JF, Mauriac F, et al. Post-traumatic stress disorder (PTSD): the syndrome with multiple faces. *Encephale* 2003; 29: 20-7.

70. Watson, M.B., Stead, G.B & Schonegevel, C. 1999. Does Holland's career hexagon shape up for disadvantaged high school students? *Proceedings of the 20th International School of Psychology Colloquium.* Australia: Australian Guidance & Counselling Association.

71. Wheeler, J.J. 1992. Occupational interests of Std10 pupils in black schools: a facet analysis. *South African Journal of Education*, 12:240-245.

72. WHO Report

73. Zagar, R., Arbit, J., Falconer, J. & Friedland, J. 1983. Vocational interests and personality. *Journal of Occupational Psychology*, 56:203-214.

74. Zak, I., Lindley, L.D. & Borgen, F.H. 2000. Personal style scales of the Strong Interest Inventory: linking personality and interests. *Journal of Vocational Behaviour,* 57(1):22-41.

75. Zak, I., Meir, E.I. & Kraemer, R. 1979. The common space of personality traits and vocational interests. *Journal of Personality Assessment,* 43(4):424-428.

Annexure A: Correlations between the 16PF and Thurston's Interest Schedule

	Physical Science	Biological Science	Computations	Business	Executive	Persuasive	Linguistic	Humanitarian	Artistic	Music
A: Warmth	**0.163**	**-0.097**	**0.006**	**0.114**	**0.065**	**0.206**	**0.087**	**0.255***	**0.245***	**0.110**
Sig. (2-tailed)	0.174	0.421	0.963	0.345	0.591	0.085	0.468	0.032	0.039	0.363
B: Reasoning	**-0.104**	**0.067**	**0.065**	**0.154**	**0.139**	**0.098**	**0.009**	**0.008**	**-0.068**	**-0.200**
Sig. (2-tailed)	0.387	0.577	0.591	0.200	0.248	0.414	0.942	0.944	0.575	0.095
C: Emotional Stability	**0.049**	**0.284***	**-0.082**	**0.074**	**-0.006**	**-0.089**	**-0.079**	**-0.024**	**0.146**	**0.025**
Sig. (2-tailed)	0.688	0.017	0.499	0.539	0.960	0.458	0.511	0.845	0.225	0.837
E: Dominance	**-0.063**	**-0.074**	**0.098**	**-0.006**	**-0.033**	**0.132**	**0.044**	**0.098**	**0.062**	**0.105**
Sig. (2-tailed)	0.603	0.539	0.417	0.961	0.783	0.274	0.715	0.414	0.605	0.382
F: Liveliness	**0.202**	**0.183**	**-0.008**	**0.088**	**0.203**	**-0.091**	**-0.083**	**-0.070**	**-0.011**	**-0.086**
Sig. (2-tailed)	0.092	0.126	0.946	0.465	0.089	0.453	0.493	0.562	0.929	0.473
G: Conscientiousness	**-0.177**	**-0.078**	**-0.009**	**-0.115**	**-0.152**	**-0.050**	**-0.073**	**0.028**	**-0.082**	**-0.163**
Sig. (2-tailed)	0.139	0.517	0.940	0.341	0.207	0.676	0.543	0.815	0.497	0.174
H: Social Boldness	**-0.167**	**-0.067**	**0.042**	**0.035**	**-0.120**	**0.013**	**-0.101**	**0.019**	**0.006**	**-0.166**
Sig. (2-tailed)	0.165	0.577	0.727	0.771	0.319	0.917	0.402	0.876	0.960	0.167
I: Sensitivity	**0.194**	**0.117**	**0.204**	**0.264***	**0.178**	**0.080**	**0.070**	**0.055**	**0.143**	**0.158**
Sig. (2-tailed)	0.105	0.333	0.088	0.026	0.139	0.506	0.561	0.648	0.235	0.187
L: Vigilance	**-0.213**	**0.031**	**-0.065**	**-0.058**	**-0.094**	**-0.017**	**-0.025**	**0.001**	**0.141**	**-0.017**
Sig. (2-tailed)	0.074	0.799	0.590	0.632	0.434	0.889	0.835	0.995	0.240	0.888
M: Abstractedness	**0.115**	**-0.033**	**0.065**	**0.011**	**0.187**	**0.168**	**0.163**	**0.115**	**-0.094**	**-0.140**
Sig. (2-tailed)	0.340	0.784	0.590	0.925	0.119	0.162	0.174	0.340	0.433	0.244
N: Privateness	**0.012**	**0.007**	**0.113**	**0.062**	**0.105**	**0.254***	**0.201**	**-0.046**	**0.111**	**-0.012**
Sig. (2-tailed)	0.918	0.952	0.346	0.606	0.384	0.033	0.092	0.703	0.358	0.923
O: Apprehension	**0.010**	**-0.044**	**-0.062**	**0.033**	**0.054**	**0.090**	**0.170**	**-0.027**	**0.021**	**0.200**
Sig. (2-tailed)	0.934	0.716	0.609	0.783	0.654	0.455	0.157	0.825	0.864	0.094
Q_1: Openness to Change	**-0.316****	**-0.014**	**-0.149**	**-0.242***	**-0.333****	**-0.261***	**-0.270***	**-0.104**	**-0.003**	**-0.002**
Sig. (2-tailed)	0.007	0.908	0.215	0.042	0.005	0.028	0.023	0.390	0.978	0.984
Q_2: Self-Reliance	**-0.125**	**-0.068**	**-0.153**	**-0.196**	**-0.104**	**-0.057**	**0.005**	**-0.256***	**-0.059**	**0.069**
Sig. (2-tailed)	0.298	0.573	0.204	0.101	0.387	0.638	0.968	0.031	0.627	0.567
Q_3: Perfectionism	**-0.219**	**-0.115**	**-0.063**	**-0.085**	**-0.297***	**-0.096**	**-0.037**	**-0.045**	**-0.017**	**-0.032**
Sig. (2-tailed)	0.067	0.341	0.604	0.480	0.012	0.428	0.761	0.709	0.889	0.792
Q_4: Tension	**0.027**	**-0134**	**-0.004**	**0.112**	**0.131**	**0.081**	**0.003**	**0.037**	**0.086**	**0.050**
Sig. (2-tailed)	0.824	0.266	0.973	0.352	0.277	0.501	0.983	0.761	0.475	0.679

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)